Coronary Heart Disease, Acute Coronary Syndrome and Angina Pectoris

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Coronary Heart Disease

(ICD/9 410-414, 429.2) (ICD/10 I20-I25; see Glossary for details and definitions)

Population Group	Prevalence CHD 2001	Prevalence MI 2001	New and Recurrent Heart Attacks and Fatal CHD	New and Recurrent MI	Mortality CHD 2001	Mortality MI 2001	Hospital Discharges CHD 2001	Cost CHD 2004
Total population	13,200,000 (6.4%)	7,800,000 (3.5%)	1,200,000	865,000	502,189	184,757	2,090,000	$133.2 billion
Total males	8,500,000 (6.9%)	4,800,000 (5.1%)	715,000	520,000	254,005 (50.6%)*	95,875 (52.0%)*	1,199,000	—
Total females	6,700,000 (6.0%)	3,000,000 (2.1%)	485,000	345,000	248,184 (49.4%)*	88,882 (48.0%)*	891,000	—
White males	6.9%	5.2%	650,000	—	224,464	85,280	—	—
White females	5.4%	2.0%	425,000	—	218,072	77,663	—	—
Black males	7.1%	4.3%	65,000	—	24,593	8,717	—	—
Black females	9.0%	3.3%	60,000	—	26,340	9,864	—	—
Mexican-American males	7.2%	4.1%	—	—	—	—	—	—
Mexican-American females	6.8%	1.9%	—	—	—	—	—	—

Note: CHD = coronary heart disease; includes heart attack, angina pectoris (chest pain) or both. MI = myocardial infarction (heart attack).
* These percentages represent the portion of total mortality that is males vs. females. (—) = data not available.
Sources: ***Prevalence:*** *NHANES III (1988-94), CDC/NCHS; data for white and black males and females are for non-Hispanics. Total population data are for Americans age 20 and older; percentages for racial/ethnic groups are age-adjusted for age 20 and older.* ***Incidence:*** *ARIC (1987-2000), NHLBI.* ***Mortality:*** *CDC/NCHS; data for white and black males and females include Hispanics.* ***Hospital discharges:*** *CDC/NCHS; data include people both living and dead.* ***Cost:*** *NHLBI; data include direct and indirect costs for 2004.*

Prevalence

- Coronary heart disease rates in women after menopause are 2-3 times those of women the same age before menopause. (FHS, NHLBI, 44-year follow-up of participants and 20-year follow-up of their offspring)
- Among Americans ages 40-74, NHANES data found the age-adjusted prevalence of self-reported MI and ECG-MI (verified by electrocardiogram) to be higher among men than women, but angina prevalence to be higher in women than men. Age-adjusted rates of self-reported MI increased among African-American men and women and Mexican-American men, but decreased among white men and women.

Incidence

- This year an estimated 700,000 Americans will have a new coronary attack. About 500,000 will have a recurrent attack. (Atherosclerosis Risk in Communities [ARIC, 1987-2000], NHLBI. These data represent Americans hospitalized with definite or probable MI or fatal CHD, not including silent MIs.)
- The estimated incidence of MI (ICD/9 410 (ICD/10 I21, I22)) is 565,000 new attacks and 300,000 recurrent attacks annually. (Atherosclerosis Risk in Communities [ARIC, 1987-2000], NHLBI)
- The average age of a person having a first heart attack is 65.8 for men and 70.4 for women. (ARIC and CHS, NHLBI)
- Based on the NHLBI's FHS in its 44-year follow-up of participants and the 20-year follow-up of their offspring... (Hurst W. *The Heart, Arteries and Veins*. 10th ed. New York, NY: McGraw-Hill; 2002)
  - — CHD comprises more than half of all cardiovascular events in men and women under age 75.
  - — The lifetime risk of developing CHD after age 40 is 49 percent for men and 32 percent for women.
  - — The incidence of CHD in women lags behind men by 10 years for total CHD and by 20 years for more serious clinical events such as MI and sudden death.

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Source: https://www.industrydocuments.ucsf.edu/docs/zymj0001

6 Other Cardiovascular Diseases

Mortality, prevalence and death rate data in this section are for 2001 unless otherwise noted. Hospital discharge data are based on ICD/9 codes.

Arrhythmias (Disorders of Heart Rhythm)

(ICD/9 426, 427) (ICD/10 I46-I49)

Mortality — 37,892. Total mention mortality — 484,000 of over 2,400,000 U.S. deaths. Hospital discharges — 786,000. In 1999, $2.2 billion ($6,041 per discharge) was paid to Medicare beneficiaries for cardiac dysrhythmias. (*Health Care Financing Review, 2001 Medicare and Medicaid Statistical Supplement,* CMS, Apr. 2003)

Atrial fibrillation and flutter (ICD/9 427.3) (ICD/10 I48). Mortality — 9,451. Total mention mortality — 71,000. Prevalence — about 2,200,000. Hospital discharges — 416,000.

- Men are more likely than women to have AF regardless of age.
- The rate of AF increases from less than 1 percent among persons less than 60 years to about 10 percent among persons age 80 and older.
- Among older adults the prevalence is higher in whites than in blacks.
- The age-standardized death rate (per 100,000) has increased dramatically in recent years from 27.6 in 1980 to 69.8 in 1998.
- Age-adjusted death rates for AF were highest among whites (25.7) and blacks (16.4) and higher for men (34.7) than women (22.8).
- From 1985 through 1999, AF first-listed diagnosis hospitalizations increased 144 percent and all-listed increased 190 percent.
- The most common diseases listed as the primary diagnosis for persons hospitalized with AF were congestive heart failure (11.8 percent), followed by AF (10.9 percent), CHD (9.9 percent), and stroke (4.9 percent).
- AF is an independent risk factor for stroke, increasing risk about 5-fold. The risk for stroke attributable to AF increases with age.
- AF is responsible for about 15-20 percent of all strokes.
- AF is also an independent risk factor for stroke recurrence and stroke severity. A recent report showed people who had AF and were not treated with anticoagulants had a 2.1-fold increase in risk for recurrent stroke and a 2.4-fold increase in risk for recurrent severe stroke.
- People who have strokes caused by AF have been reported as 2.23 times more likely to be bedridden compared to those who have strokes from other causes.

Tachycardia (ICD/9 427.0,1,2) (ICD/10 I47.0,1,2,9). Mortality — 6,496. Total mention mortality — 8,000. Hospital discharges — 95,000.

- **Paroxysmal supraventricular tachycardia** (ICD/9 427.0) (ICD/10 I47.1). Mortality — 137. Hospital discharges — 33,000.

Ventricular fibrillation (ICD/9 427.4) (ICD/10 I49.0). Mortality — 1,406. Total mention mortality — 15,900. Hospital discharges — 7,000. Ventricular fibrillation is listed as the cause of relatively few deaths, but the overwhelming number of sudden cardiac deaths from coronary disease (estimated at about 340,000 per year) is thought to be from ventricular fibrillation.

Arteries, Diseases of

(ICD/9 440-448) (ICD/10 I70-I79) (Includes peripheral arterial disease)

Mortality — 39,414. Total mention mortality — 122,200. Hospital discharges — 274,000.

Aortic aneurysm (ICD/9 441) (ICD/10 I71). Mortality — 15,234. Total mention mortality — 21,900. Hospital discharges — 63,000.

Atherosclerosis (ICD/9 440) (ICD/10 I70) is a process that leads to a group of diseases characterized by a thickening of artery walls. Mortality — 14,086. Total mention mortality — 72,100. Hospital discharges — 110,000. Atherosclerosis causes many deaths from heart attack and stroke and accounts for nearly three-fourths of all deaths from CVD. (FHS, NHLBI)

- In 1999 U.S. community hospitals billed $26.2 billion for coronary atherosclerosis, more than for any other condition.

Other diseases of arteries (ICD/9 442-448) (ICD/10 I72-I78). Mortality — 10,084. Hospital discharges — 101,000.

- **Kawasaki disease** (ICD/9 446.1) (ICD/10 M30.3). Total mention mortality — 7. Up to 2,500 cases of Kawasaki disease are diagnosed yearly. Hospital discharges — 5,000, primary plus secondary diagnoses.
  - About 80 percent of Kawasaki disease patients are under age 5; most are under age 2. Children older than 8 years are rarely affected.
  - Kawasaki disease occurs more often among boys (63 percent) and among those of Asian ancestry.
  - The highest incidence in the United States is in Hawaii. A hospitalization rate of 47.7 per 100,000 children under age 5 was reported during the mid-1990s. In the continental United States, the estimated incidence is from 9 to 19 per 100,000 children.

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Source: https://www.industrydocuments.ucsf.edu/docs/zymj0001